

Fentress County

Municipal Solid Waste Planning Region

2009 Qualitative Review



Tennessee Department of Environment and Conservation
Division of Solid and Hazardous Waste Management
Solid Waste Assistance Programs
401 Church Street, 5th Floor
Nashville, Tennessee 37243

Introduction

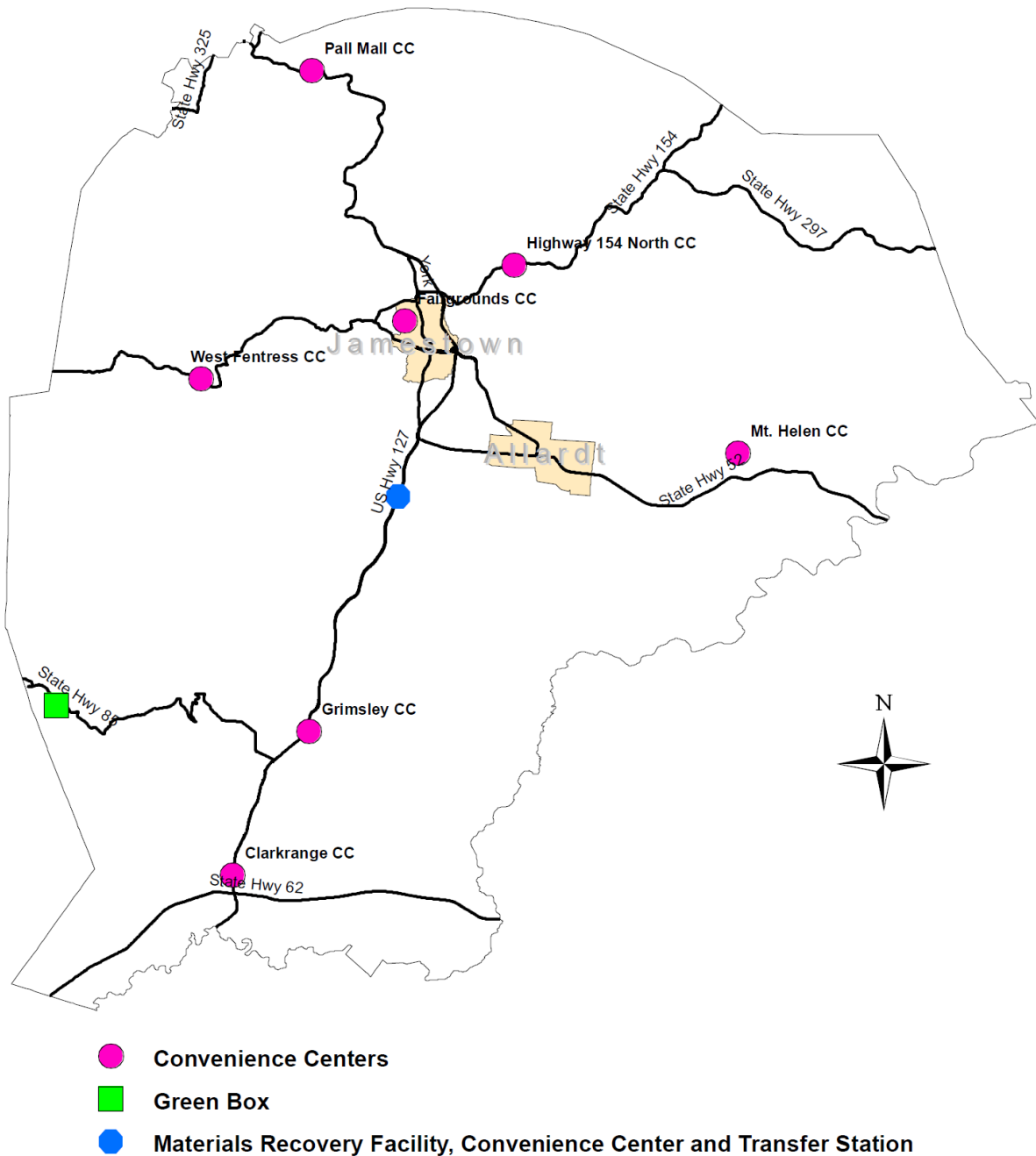
Tennessee's *Solid Waste Management Act of 1991* (SWMA) required solid waste regions to achieve a twenty-five percent (25%) waste reduction and diversion goal for solid waste going into Class I landfills by December 31, 2003. Under T.C.A. § 68-211-861, the basis for determining compliance with this goal was based on a per capita reduction measurement that may be adjusted for economic or population trends, or by a qualitative assessment that evaluates whether the region had comparable progress to those of similar regions that made the goal. Until 2003, the need to define the qualitative assessment was not necessary since there were no regions out of compliance. After the 2003 reporting period, 34 regions failed to meet the 25% waste reduction and diversion goal, which necessitated the promulgation of rules describing the methodology for qualitative assessment of regions failing to meet the per capita base year reduction and diversion. These rules became effective August 6, 2006.

The first step in the qualitative assessment process is to determine if the failing region met the 25% waste reduction and diversion goal using the real-time methodology. This method is calculated annually by dividing the total amount recycled and diverted from Class I landfills by the total generated waste stream. If the region did not meet the goal through this process, the region is then reviewed in order to determine if a "good faith" effort was made toward compliance and if their programs and solid waste infrastructure are qualitatively equivalent to like regions of similar population and economic characteristics who have achieved the goal.

In 2009, five regions failed to meet the goal by either base year or real-time methods. With a base year reduction of 5% and an initial real-time diversion rate of 21%, the Fentress County Municipal Solid Waste Planning Region was one of these regions. The regions selected for comparison with Fentress were Benton and Haywood.

On October 28, 2010, Division of Solid and Hazardous Waste Management staff members Larry Christley and Ashby Barnes visited with Fentress County Executive W. Frank Smith and Solid Waste Director Faye Dalton to discuss all facets of the solid waste management programs. Visits were made to the convenience centers, green box location and recycling locations. The equipment at these facilities was examined and noted.

Fentress Municipal Solid Waste Planning Region Solid Waste System



As of 11/01/2010

Solid Waste Facilities and Infrastructure

Every county in Tennessee is required by law to provide a minimum level of waste reduction and waste collection assurance. Fentress County's solid waste collection and recycling programs serve a population of 17,677 and an area of 499 square miles. The minimum number of convenience center sites required by state statute, based on Fentress' population, is calculated at one location. County residents have the option of using eight convenience centers at the following locations:

- 3317 South York Highway in Jamestown (Woodyard)
- 515 Fairgrounds Road in Jamestown (Fairgrounds)
- 6800 South York Highway in Clarkrange (Clarkrange)
- 119 Conatser Road in Grimsley (Grimsley)
- 4029 Stockton Road west of Allardt (Mt. Helen)
- 2075 Pickett Park Highway northwest of Jamestown (Highway 154)
- 3128 Livingston Highway in Jamestown (West Fentress)
- 3280 North York Highway Pall Mall (Pall Mall)

The Woodyard Convenience Center is open 6 am to 6 pm, Monday through Saturday. The Fairgrounds Convenience Center is open 1 pm to 4 pm on Sunday, and 6 am to 6 pm, Monday through Saturday. The Clarkrange Convenience Center is open 7 am to 6 pm, Monday, Friday and Saturday, and 11 am to 6 pm on Wednesday. The Grimsley Convenience Center is open 6 am to 6 pm, Tuesday, Thursday, and Friday, and 9 am to 6 pm on Saturday. The Mt. Helen Convenience Center is open 7 am to 6 pm, Tuesday, Thursday, and Saturday. The Highway 154 Convenience Center is open 7 am to 6 pm, Tuesday, Thursday, and Saturday. The West Fentress and Pall Mall Convenience Centers are open 11 am to 6 pm, Tuesday, Thursday, and Saturday.



Photograph 1: Compactor and receiver at the Clarke Range Convenience Center

The convenience centers are well maintained and are equipped with compactors and sufficient receptacles to handle the waste. After compaction, the waste is hauled to the transfer station located at 3317 South York Highway in Jamestown, which is adjacent to the Woodyard Convenience Center. From the transfer station, the waste is hauled to the Volunteer Regional Landfill, owned and operated by Waste Connections, Inc., in neighboring Scott County.

These centers also have a 500 gallon tank for used oil collection, in addition to several open top roll-off containers, open top 55 gallon drums, and plastic frames with netting for collection of cardboard, newspaper, office paper and magazines, glass, #1 through #7 plastics, aluminum cans, and scrap metal. These sites also accept electronics, latex and oil-based paint, appliances, lead acid batteries, oil filters and antifreeze. Solid Waste Director Faye Dalton markets these recyclable materials.

Fentress County staffs and operates all of the convenience center locations and receives revenue from the sale of the recyclable commodities collected. These commodities are taken to the materials recovery facility (MRF) at 3317 South York Highway and Mustang Lane in Jamestown for consolidation, baling and storage prior to being shipped or picked up by various recycling companies.



Photograph 2: Wilder Green Box Location

In addition to the convenience centers, residents may use a public collection or “green box” location at 1017 Vines Ridge Road, off Highway 85, in the sparsely populated community of Wilder in the southwestern part of the county. This location is unmanned and does not collect recyclables but is fenced and open from 10 am to 6 pm, Tuesday and Saturday. “Green box” sites are referenced in T.C.A. § 68-211-851(d)(1), which states that, “not later than July 1, 1997, each county which maintains and uses receptacles for the collection of municipal solid waste from the general public at sites separate from a convenience center for the needs of residents of the county shall

submit to the department. . .” the location and operational information of these locations. Furthermore, T.C.A. § 68-211-851(d)(3) states that, “A county which did not have receptacles in use on January 1, 1996, or which subsequent to such date discontinues use of any receptacle permitted under this section, shall be prohibited from installing or maintaining additional receptacles after July 1, 1996.” According to a letter dated June 18, 1997, and signed by Faye Dalton, Fentress County Waste Reduction Manager at that time, the county operated one “green box” site. This site remains in operation today.

The county has plastic bins placed at all of its buildings and all six schools for the collection of cardboard, paper, plastic containers, as well as aluminum and steel food cans. These items are then taken to the nearest convenience center for consolidation.

Fentress County has two unmanned recycling collection points located in the cities of Jamestown and Allardt. These locations have a compartmentalized roll-off container for segregated plastic, aluminum and steel cans.

Fentress County offers free door to door recycling pickup for businesses throughout the county, Monday through Friday. The businesses save their cardboard, paper, plastic containers, as well as aluminum and steel food cans and then the county picks the recyclable material up.

Recycling information is presented to students at the schools annually, as well as to Boy Scout, Girl Scout, Rotary and Garden Club, Fentress County Fair, and through the Great American Cleanup and Keep Tennessee Beautiful programs.

The Fentress County Solid Waste Department is managed by Faye Dalton, Solid Waste Director. Mr. Jacky Selby is the MRF Supervisor and Micky Brown is the Convenience Center Operation Supervisor. The Solid Waste Department has 22 full-time and 10 part-time staff members. In addition to being Solid Waste Director, Faye Dalton also acts as the Recycling Coordinator, Commodity Marketing Director and Litter Program Manager.

Fentress’ county seat is Jamestown which has a population of 1,839. According to Mayor Gwenith Duncan, the city of Jamestown does not offer any waste collection service for their residents and relies on city residents taking their household waste to the county’s convenience centers for collection and disposal. Jamestown provides the county a portion of their sales tax to help defray the solid waste cost.

The municipality of Allardt has a population of 642. According to Faye Dalton, Allardt provides curbside waste collection for their residents. Public Works employees collect the waste in a city truck and take it directly to the Fentress County transfer station. The county does not charge Allardt for disposal at the transfer station.

Financial Information

T.C.A. § 68-211-874(a) states that each county, solid waste authority and municipality shall account for financial activities related to the management of solid waste in either a special revenue fund or an enterprise fund established expressly for that purpose. According to the Fiscal Year 2008-2009 Annual Financial Report of Fentress County Tennessee performed by the Tennessee Comptroller of the Treasury, the county operates a special revenue fund to account for its solid waste program. The solid waste financial information was examined by department staff.

Revenues

Local Taxes	\$995,702
Charges for Current Services	\$215,448
Other Local Revenues	\$104,841
State of Tennessee (Grants)	\$70,086
Total	<u>\$1,386,077</u>

Expenditures

Sanitation Management	\$109,245
Sanitation Education/Information	\$11,376
Waste Pickup	\$190,642
Convenience Centers	\$369,073
Problem Waste Centers	\$12,300
Other Waste Collection	\$4,256
Recycling Center	\$236,512
Landfill Operations and Maintenance	\$343,988
Post Closure Care Costs	\$8,466
Total	<u>\$1,340,462</u>

* Excess (Deficiency) of Revenues..... \$45,615

Fund Balance, July 1, 2008	\$709,659
Fund Balance, June 1, 2009	\$755,274

Fentress County's revenues for Fiscal Year 2008-2009 were \$5,874,199 and the total expenditures were \$5,836,966. The county's solid waste revenues were \$1,386,077 and the solid waste expenditures were \$1,340,462. The solid waste revenues were 23.6% of the total county revenues and the solid waste expenditures were 23.0% of the total county expenditures.

From a solid waste management standpoint, the expenditures and revenues appear to be in line with state mandates. Fentress County's solid waste revenues and expenditures were found to be financially solvent.

Environmental Field Office Report

The Cookeville Environmental Field Office inspected Fentress County facilities six times in 2009 and six times in 2010. According to records of the Division of Solid and Hazardous Waste Management, there were no notices of violation (NOVs) issued for Fentress County in either 2009 or 2010.

Solid Waste Planning Board

The Solid Waste Management Act states that every solid waste region in the state must appoint a regional municipal solid waste planning board, composed of representatives of each county and each city which participates in the solid waste planning region. The Municipal Solid Waste Planning Region Board is responsible for accurately reviewing and approving annual progress reports and is instrumental in the approval process for any new solid waste permits for the region. At a minimum, having an active board that meets with regularity is vital to complete these tasks. The planning board is also responsible for developing MSW solid waste plans, assessing disposal capacity, collection assurance, providing for solid waste education, and assisting in other aspects of integrated solid waste management. Duties and powers of the municipal solid waste planning board are spelled out in T.C.A. § 68-211-813 thru 815.

Fentress County Solid Waste Director Faye Dalton stated that the planning board meets once every three months, although it sometimes meets more often if solid waste issues arise. Recently, the board met to determine what to do with 300 acres that the county bought for the landfill that is now closed. The board also advised the county to purchase a new back hoe for the solid waste department and discussed incentives that would encourage businesses to increase the amount of material recycled.



Photograph 3: Horizontal baler at the MRF and pile of cardboard prior to baling

Analysis of Local Conditions

In 1995, the State of Tennessee averaged 1.3 tons per capita of municipal solid waste placed into Class I landfills. By contrast, in 1995, the Fentress County Municipal Solid Waste Region (the Region) reported 9,034 tons of waste going into Class I landfills, or 0.58 tons per person. A 25% reduction of this value would require a disposal rate of 0.44 tons per person per year. In 2003, the goal's effective year, the Region reported 10,079 tons of Class I waste, or .60 tons per person. The reported Class I waste was 10,051 tons (0.57 tons per person) in 2009. The State of Tennessee averaged 0.98 tons per capita in 2009. Over the last 15 years, the Region's population has risen a small amount while Class I disposal has fluctuated slightly.

Since 2003, data provided in the County Recycling Report of the Annual Progress Reports has been very consistent. From 2003 to 2008, an average of 5,110 tons of publicly collected recyclables was recorded by the Region. In 2009, reported commodities were 4,318.5 tons. In the first five years, the Region reported very little recycling done by commercial, industrial and institutional entities in the county. However, beginning two years ago, more non-public entities were reported. In 2008, these non-public entities reported 3,360.3 tons of recycling. In 2009, fewer entities reported their recycling and the total non-public recycling decreased to 1,228.4 tons.

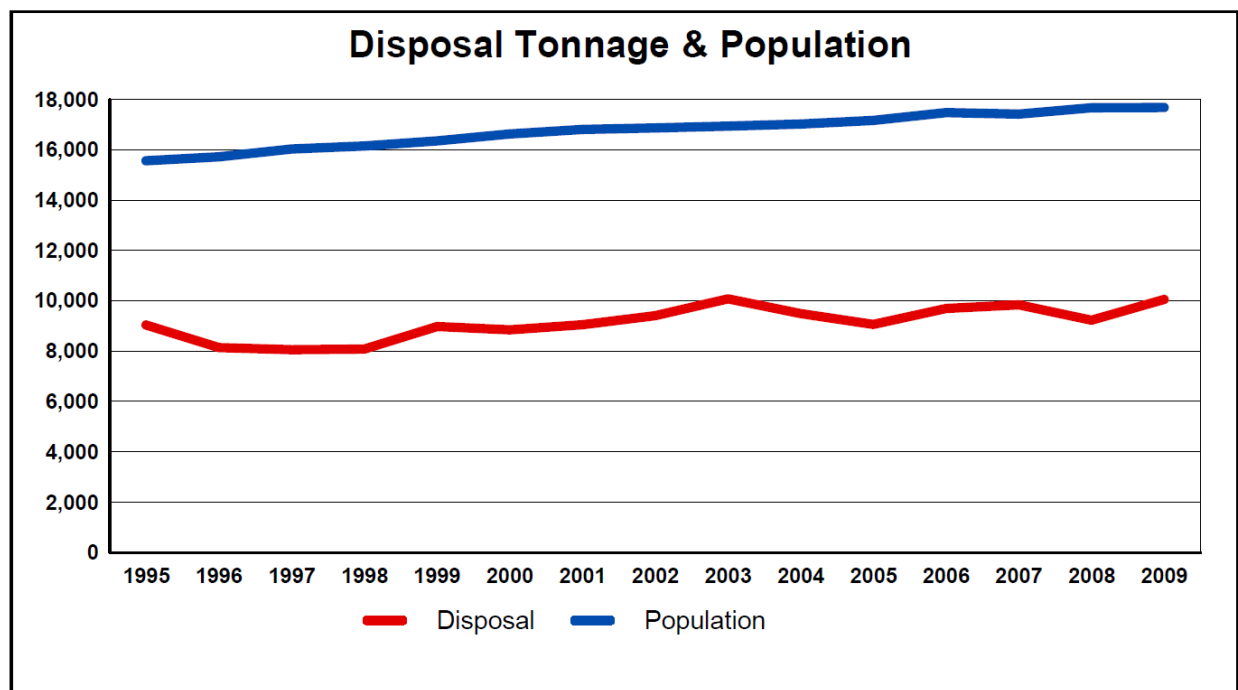
The 2009 Annual Progress Report (APR) submitted by the Region listed 8,480 tons of waste disposed of in Class I landfills. During the review of the APR, it was noted that the 8,480 reported tons were less than half of the 21,370.36 tons of Class I disposal listed in the Solid Waste Origin Report as submitted by the Class I landfills. The discrepancy was due to 13,910.77 tons of waste credited to Fentress County by Volunteer Regional Landfill in Scott County. During the review process, in consultation with the Volunteer Regional Landfill, Fentress County, and the Upper Cumberland Development District, the tonnage from Volunteer Regional Landfill was added to the 2009 APR due to a lack of contradictory evidence.

During the qualitative review period and record searches with Volunteer Regional Landfill, questions arose as to the validity of the landfill's origin reports. In emails and telephone calls with Melissa Jeffers of Waste Connections, it was determined that the landfill had incorrectly credited 11,318.67 tons to Fentress County in the Third Quarter 2009 Solid Waste Origin Report. This finding was corroborated by a review of past origin reports that showed Fentress County had never disposed of more than 2,900 tons of solid waste in any one quarter, and therefore the larger amount was not Fentress County's normal waste flow.

The 11,318.67 tons of waste in question should not have been added by the Department to the 2009 APR. When this amount is subtracted from the accepted 2009 disposal, the region's correct reduction rate is 36% using the Real-Time method.

Statistics

Year	Population	Disposal	Tons Per Capita
1995	15,565	9,034	0.58
1996	15,714	8,138	0.52
1997	16,034	8,052	0.50
1998	16,153	8,076	0.50
1999	16,357	8,982	0.55
2000	16,625	8,841	0.53
2001	16,805	9,050	0.54
2002	16,868	9,403	0.56
2003	16,935	10,079	0.60
2004	17,023	9,496	0.56
2005	17,159	9,063	0.53
2006	17,480	9,698	0.55
2007	17,420	9,842	0.56
2008	17,667	9,229	0.52
2009	17,677	10,051	0.57



Comparison Counties

Based on the Fentress County Municipal Solid Waste Planning Region's reported Class I disposal and tons diverted, the region met the 25% waste reduction and diversion goal in 2009. However, due to a clerical error at the Volunteer Regional Landfill, an incorrect tonnage amount was reported and Fentress County was credited with a higher Class I disposal amount. Therefore, the Department was required to assess the activities and expenditures of the region, and local governments in that region, to determine whether the region's program is qualitatively equivalent to other regions that met the goal, and whether the failure was due to factors beyond the control of the region. This qualitative assessment method, prescribed by the Department and approved by the Municipal Solid Waste Advisory Committee, was promulgated as a rule in accordance with the provisions of the Uniform Administrative Procedures Act, compiled in Title 4, Chapter 5. The two regions selected for the comparison were Benton and Haywood.

BENTON COUNTY MUNICIPAL SOLID WASTE PLANNING REGION (the Region) achieved the waste reduction and diversion goal in 2009 with a base year reduction of -68% and a real-time diversion rate of 27%. The comparison Region had a 1.11 per capita disposal rate for 2009.

Benton County's waste collection program consists of one convenience center, which accepts used tires only, located at 1590 Mt. Carmel Road near Camden. The center is open to all Benton County residents from 8 am to 4 pm on Monday and Tuesday and 8 am to noon on Wednesday. The county and the city of Camden contract with Barker Brothers Waste Service to collect and haul residential trash. Commercial and industrial waste is handled by various private haulers. Benton is the host-county for West Camden Class I Landfill and receives a "host-fee" for all waste going into the landfill.

The vast majority of recycling and diversion reported in 2009 consisted of mixed metals and auto scrap handled by CSC Recycling. The county has expressed interest in expanding both the public and private recycling efforts; however, it lacks funding at the present time and can only hope for assistance from grant funding.

Benton County's estimated total expenditures for Fiscal Year 2008-2009 were \$28,658,134 and the total revenues were \$25,999,520. The county's solid waste expenditures were \$2,557,867 and the solid waste revenues were \$2,802,845. The county began the fiscal year with a fund balance of \$18,302,796. The solid waste expenditures were 8.9% of the total county expenditures and the solid waste revenues were 10.8% of the total county revenues.

HAYWOOD COUNTY MUNICIPAL SOLID WASTE PLANNING REGION (the Region) achieved the waste reduction and diversion goal in 2009 with a base year reduction of -6% and a real-time diversion rate of 59%. The Region had a 0.92 per capita disposal rate in 2009 and has reported increasing Class I disposal numbers over the past ten years.

Haywood County's waste collection program consists of one recycling center/drop-off site, a convenience center/transfer station located at the Class III/IV landfill, and approximately 91 "green box" sites located throughout the county, as well as approximately 20 dumpsters for the collection of cardboard and mixed paper at commercial sites throughout the county. The convenience center operates from 8 am to 4:30 pm, five days a week (closed Saturdays and Sundays). The recycling drop-off site is accessible 24 hours a day, 7 days a week. The convenience center/transfer station is equipped with several open-top dumpsters for the collection of household waste. County operated trucks transport waste from the "green box" sites around the county to the transfer station, and then trucks owned by Browning-Ferris Industries, Inc. (BFI), a subsidiary of Republic Services, Inc., hauls the waste to the North Shelby Class I Landfill.

The recyclable materials accepted at the county recycling drop-off site are cardboard, mixed paper, plastic, glass, aluminum and metal cans, batteries, used oil, E-scrap and paint. The county has also begun collecting cardboard, paper, plastic, and metal cans at county schools and county government buildings. Used oil is also accepted at the county highway department and used tires are accepted at the Class III/IV landfill. As part of an agreement between the counties, all of the paint is given to Hardin County for processing.

The recycling center is equipped with two vertical balers, a fork-lift, and various stationary and portable bins for separating and storing the different materials. The county also operates a paper shredding service at this site. Marketing of these materials is handled by the solid waste director and his staff. Operation of the county's Class III/IV landfill is conducted by the county. The Haywood County Solid Waste Department has 10 full-time employees in the operation of its transfer station, convenience center, recycling center, and the Class III/IV landfill.

The city of Brownsville is the largest municipality in Haywood County, and also the county seat. Brownsville provides curbside collection of household waste for residents as well as commercial waste pick-up for area businesses. In Brownsville, the waste is collected by city owned and operated trucks and delivered to the county's transfer station for transportation to North Shelby Class I Landfill. Additionally, Brownsville offers curbside collection for corrugated cardboard, plastic, glass, mixed paper and aluminum and other metal cans. These materials are collected by city owned trucks and hauled to the county recycling center. Yard waste is also collected by the city and placed at a city operated mulching area.

The city of Stanton provides curbside collection of household waste for residents as well as commercial waste pick-up for area businesses. A contractor collects the waste and delivers it to Haywood County's transfer station for transportation to North Shelby Class I Landfill. Stanton does not have a recycling collection program.

Haywood County's estimated total revenues were \$9,721,309 for Fiscal Year 2008-2009 and the total expenditures were \$10,250,519. The county's solid waste revenues

were \$511,404 and the solid waste expenditures were \$896,689. The county began the fiscal year with a fund balance of -\$850,383 and it ended the fiscal year with a fund balance of -\$940,867. The Fiscal Year 2008-2009 annual financial report prepared by external auditors stated that the Solid Waste Disposal Fund's deficit resulted in recognition of a liability for costs of closing the county's landfill and 30 years of post-closure monitoring. The auditor's finding stated that the deficiency of funds existed because of failure by management to correct the finding noted in earlier audit reports and failure to provide adequate funding for the liability. The solid waste revenues were 5.3% of the total county expenditures and the solid waste expenditures were 8.7% of the total county revenues.



Photograph 4: Can crusher machine at the MRF

Qualitative Equivalency

As stated earlier, T.C.A. § 68-211-861 requires each municipal solid waste planning region to achieve a 25% waste reduction and diversion goal for solid waste going to Class I landfills. The Fentress County Municipal Solid Waste Planning Region's perceived failure to realize this goal caused the Department to assess the Region's solid waste reduction program activities and expenditures to determine if it was qualitatively equivalent to other comparative regions that did reach the reduction goal.

During this qualitative assessment and visit to Fentress County and its municipalities by Department staff, all areas of the Region's waste reduction programs were determined to be qualitatively equivalent to those of the comparative regions. Fentress County and its municipalities have viable waste collection and disposal systems with an adequate number and location of collection facilities. Department staff noted some areas of the system that can be improved. These areas are discussed further in the "Recommendations for Improvement" section of this document.

Needs Assessment

T.C.A. § 68-211-811 required the development districts to submit a district needs assessment for each county in the district by September 30, 1992. These needs assessments, to be conducted by the development district staff, shall be revised to reflect subsequent developments in the district by April 1, 1999, and every five years thereafter. Fentress County's most recent Needs Assessment was completed by the Upper Cumberland Development District in 2011.

The Upper Cumberland Development District states that with the loss of manufacturing, the economy has weakened and growth has slowed. Additionally, with this loss comes the loss of recycling materials that could have been reported.

The Needs Assessment states that waste tire collection has increased in the Region over the past three years, which has put an added strain on the solid waste department's finances.

Fentress County continues to provide many opportunities for its citizens to recycle; with well placed convenience centers and recycling drop-off locations spread throughout the county and its free recycling pickup offered to area business. The Needs Assessment suggests that additional part-time staff members, expanded covered space at the recycling center and newer equipment would allow the county to continue to expand its collection and recycling. Listed as an example, in order to collect oil base paint, Fentress County would need ventilated shipping containers, and a dump bucket for the forklift. An additional 10,000 sq. ft. building would supply extra storage space for recycling materials so that greater volume of recyclable material could be collected and stored while waiting to be marketed.

An additional recommendation that the Needs Assessment offers the county is that it should continue its many and diverse recycling education programs that inform the citizens of the Fentress County about the importance of waste diversion and recycling. The Upper Cumberland Development District states that this will only serve to increase recycling and waste diversion.

In summary, the Needs Assessment points out that, as is the case in all regions, there are still things that the Fentress County Municipal Solid Waste Planning Region can do to further enhance the diversion of solid waste from Class I landfills. The economy has slowed down changes and improvements. The future will place a greater emphasis on the cost benefit analysis of programs during the next five years. However, the Region will continue to reach for their goal of having one of the most comprehensive recycling programs in the state of Tennessee.

Recommendations for Improvement

The Fentress County Municipal Solid Waste Planning Region has consistently met the waste reduction and diversion goal over the last ten years. The reported Class I solid waste disposal tonnage and per capita disposal rate has also been very consistent over this period. As a whole, the Region is doing very well and a few of the individual waste management programs have made successful strides toward providing their constituents with the best waste reduction options in the state. Even so, the following are areas that the Region should consider moving forward:

- Fentress County and the cities of Jamestown and Allardt should increase the Region's waste reduction efforts by the mulching or composting of yard and wood waste. At a minimum, diversion of these materials to Class III/IV facilities is needed.
- Fentress County should continue to collect disposal and recycling information from all area businesses. This would help the county include as much recycling information in the Annual Progress Report as possible. Continued frequent communication with businesses and citizens will provide current information and aid the county in its reporting requirements.
- All local governments should continue the use of its websites and free social networking sites to help educate and inform residents of the waste reduction efforts such as available recycling programs, facility locations and hours, and other program related information.



Photograph 5: Cardboard and E-scraps at the West Fentress Convenience Center

Conclusion

T.C.A. § 68-211-861 requires each municipal solid waste planning region to achieve a twenty-five percent (25%) waste reduction and diversion goal for solid waste going to Class I landfills by December 31, 2003. The Fentress County Municipal Solid Waste Planning Region failed to meet the required goal in calendar year 2009. This failure

caused the Department to qualitatively assess the Region's solid waste reduction program activities and expenditures to determine if it was qualitatively equivalent to other comparative regions that did reach the goal.

After reviewing the Region's programs, finances, infrastructure, education and staffing; it is the opinion of the Department that Fentress County has similar waste reduction and disposal programs in design and implementation, and are, therefore, qualitatively equivalent to the comparative regions and are making a "good faith" effort toward meeting the waste reduction and diversion goal.